Prairie Agriculture in 1991: Coping With the Uncertainty or "Coming to Grips with Grip!"

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Introduction

Change is occurring around us at a tremendous rate. Each of these changes tends to increase the level of uncertainty facing decision makers all over the world whether these decision makers are the heads of corporations or individuals operating farm businesses. Recently, some major events which affect the prairie agricultural sector and the lives of each of us have occurred. Some of these major events are listed below.

- the Gulf War in Iraq
- economic and civil unrest in the USSR
- collapse of the GATT and its recent revival
- a possible three way free trade agreement with the U.S. and Mexico
- large debts in governments, corporations and farms
- unification of Germany
- Meech Lake collapse
- international trade war in agricultural commodities
- finally, the most important of these in terms of direct financial impact for a Saskatchewan grain farm and the uncertainty for the upcoming crop year is GRIP.[1]

All of the above events affect the uncertainty facing decision makers at the farm level. However, prior to the announcement of GRIP, none have had a more direct impact on Saskatchewan farmers during the past few years than has the international trade war in agricultural commodities. Unprecedented use of export subsidies by both the U.S. and the E.E.C. have reduced the world price of agriculture commodities to levels below the cash costs of production based on many recent sales. As a result, the percentage of income grain producers in Saskatchewan earn from the market has fallen significantly over the last number of years. In order to stabilize farm incomes, both the federal and provincial governments have provided income support through various farm programs. At first, this support was provided through long-term income stabilization programs like Crop Insurance and the Western Grain Stabilization program (WGSP). However, when the WGSP began to "play out" due to its short five year average trigger mechanism, the federal government responded with ad hoc programs like the Special Canadian Grains I, Special Canadian Grains II and the Drought Assistance program of 1988.

Many criticized the ad hoc nature of these programs because most were announced "after the fact" and thus did not provide producers any ability to plan for the crop year. In a sense, the ad hoc nature of these programs tended to increase the uncertainty faced by the agricultural producer because the producer had to "guess" whether there would be an ad hoc payment and perhaps just as importantly, he/she had to "guess" how and on what crops it would be paid. The

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[1]GRIP is the recently announced Gross Revenue Insurance Plan. It is assumed that the reader has a working knowledge of GRIP due to the numerous regional meetings that have been held in Saskatchewan to explain the program to farmers. Mr. Mike Makowsky presented the material in Saskatoon immediately prior to the presentation of this paper.

"how it would be paid" was very important since this could affect the eligibility of the farm operation and the size of its government payment. For instance, peas, lentils, mustard and other speciality crops had not been eligible under the Special Canadian Grains I program.

Many people in the agricultural industry noted that the Canadian system of ad hocery contrasted sharply with the environment faced by U.S. farmers who operated under the U.S. Farm Bill. The Farm Bill, which is renegotiated every five years, provided clear support and signals to U.S. producers prior to their planting decisions. Target prices, loan rates, set asides, and conservation reserves, etc. were all transparent to the producer. Therefore, in the U.S., the producer faced no uncertainty with regards to government transfers. The rules of the game were known before they began to play. Not surprisingly, many argued that Canadian farm policy designers could learn a lot from the American system.

In response to the need for a more long-term approach to farm policy in Canada, the federal government began the Agriculture Canada Agriculture Policy Review with the Agriculture Outlook Conference held in December of 1989. They launched this review process by presenting a green paper on the agriculture industry entitled Growing Together. The review process set up a number of task forces to look at different components of the industry. The objective of one of the task forces was to examine and design long-term safety nets for the Canadian agricultural sector.

After approximately a year of deliberations and a couple of interim reports, the safety net committee announced two new long-term agricultural safety net programs; Gross Revenue Insurance Plan (GRIP) and Net Income Stabilization Account (NISA). The remainder of the paper focuses on the GRIP program and its possible influences in Saskatchewan for the coming crop year.

Coming to Grips with GRIP

GRIP represents a major change in prairie agriculture policy. First, it has added a degree of certainty because now producers know that there will be more support dollars from provincial and federal governments. However, due to the lateness of the program announcement and the lack of any new legislation, the program also adds some additional uncertainty for the upcoming crop year. Many producers and agricultural professionals are still uncertain regarding exactly how the new program will work. Many of the "rules of the game" are still unknown at this time. In particular, little or no information is available on premium levels for crops, the final support price (IMAP) for each commodity, how new crops may be treated, and a whole host of other important features which are important to decision makers in determining what to plant this spring? This uncertainty is illustrated by the many farmers who are asking, "What should I do?" and "What will my neighbours do?"

The second major change associated with GRIP is in regards to how the program will make payouts. GRIP provides an annual set of planning prices by crop. Therefore, it is not merely a safety net .... but a set of planning prices for the coming crop year. In other words, GRIP prices and yields will be more important than market prices and expected yields for many crops this year. Consequently, for 1991, GRIP effectively muzzles market signals. However, for

a more detailed discussion of how GRIP muzzles market signals as well as an explanation of other important concerns we have with the GRIP program, we provide a paper written with several colleagues as an appendix to this paper.[2] The appendix also discusses two possible amendments to GRIP which would alleviate many of the concerns we address in the paper. The remainder of the current paper addresses the farm management implications of GRIP based on many of the concerns discussed in the appendix.

Farm Management Implications of GRIP

Farm management strategies as a result of GRIP are often innovative and unique since the strategy for any particular farm operation depends on many factors. The purpose of this section is to discuss these factors and their implications for decision making. The first important factor is the recent history of crops grown on the farm operation. This is important because the crops you have grown in the past and the percentage of the cultivated acreage seeded on a farm operation are important factors in determining how many acres are eligible for GRIP this year. For instance the 10% increase in seeded acreage rule means that your past seeded acreage will influence how many acres are eligible for GRIP this year. In addition, whether a producer has grown specialty crops in the last 3 years is also important because non-specialty crop growers will have restrictions which specialty crop growers will not. (Current discussions suggest a maximum of 20 percent of seeded acreage for special crops will be imposed).

The second important factor is the individual producer's historical yield with crop insurance for each of the crops grown. An individual's historical yield with crop insurance is generally a function of their claim history with crop insurance. Producers with low claim histories with crop insurance tend to have yield coverage greater than the area average while the opposite occurs for producers with high claim histories. Producers who have not participated in crop insurance have to enter GRIP at the area average coverage for their quality of soil unless they can provide historical production records for each of the crops they have grown on their farm for a 10 year period.[3] Therefore, with GRIP, the producer's history with crop insurance may be more important than the current level of management in determining gross and net farm income for 1991. High level management producers who used high levels of input but who have not participated in crop insurance are at a potential disadvantage for 1991.

The most profitable strategy with GRIP in 1991 appears to be to seed the crops with the highest GRIP revenue guarantee net of the producer's "expected" cash costs of production where the premium cost by crop for GRIP is considered as one of the important "expected" costs of production. However, given the

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[2]See the paper "Proposed Amendments to GRIP", Richard Gray, Ward Weisensel, Ken Rosaasen, Hartley Furtan and Daryl Kraft, which is appended.

[3]The Crop Insurance Corporation may accept less than 10 years of individual records under special circumstances.

rather simple strategy indicated above, there are a number of additional factors to keep in mind when deciding which crops to grow in 1991. (1) Higher input use does not equal higher profit in the short-run. The reason for this is that it is virtually impossible to do better than the revenue guarantees for many of the crops in 1991. Therefore, there is no immediate reward for intensive input use. However, it may provide greater future rewards due to increased future yield coverage. (2) Yield outcomes for 1991 will affect future levels of coverage through changes in a producer's individual yield. Therefore, low yields this year mean less coverage next year. (3) The bankability of GRIP differs for board and non-board crops.

The concept of bankability is important and we will elaborate on it further here. Within the GRIP program, the safety net committee recognized that perfect revenue insurance was unworkable for two reasons. (1) Perfect revenue insurance meant that the administrators of the program would have to have a record of every sale as these sales occurred throughout the year on every farm operation in the province. They realized that this was administratively unfeasible. (2) Perfect revenue insurance would take away all the incentive to market commodities effectively and seek to achieve the highest price by aggressively seeking market opportunities. In other words, with perfect revenue insurance a producer would be indifferent to the price they actually sold their product at (unless of course the producer could sell for a price better than the guaranteed price under GRIP, which is very unlikely for most crops during the 1991/1992 crop year) because they know that they would be insured for the full difference between the market price and the guaranteed price. Therefore, the safety net committee decided that all producers would be paid indemnities based on the difference between the guaranteed price and the average market price of the commodity over some specified period of time after harvest. As a result, producers who sell their commodities for better than the average market price will receive more than the guaranteed revenue and producers who sell their commodities for lower than the average market price will receive less than the guaranteed revenue for their farm based on average market prices. Therefore, the GRIP program is much more bankable for board crops than it is for non-board crops because with board crops all producers receive the average pooled price. In contrast, with non-board crops, producers are not "guaranteed" their guaranteed revenue unless they can sell for the average market price or better.

A further implication for both Board and Non-Board crops is that if inventory remains unsold at the end of the crop year, it is valued at the end of the crop year. This inventory is an asset but it is not cash. Therefore, if stockpiles of unsold inventories exist, these are also not bankable. In addition, on this unsold inventory individual producers face the price risk of moving this inventory into the new crop year.

Implications for Farm Business Organizations

GRIP will create incentives to alter the organizational structure of many farm operations because of a number of factors. First, with GRIP, a producer must give 3 years notice of withdrawal and must wait an additional 2 years to get back in. In addition, it is well known that the payouts in GRIP are expected to be significantly greater than premiums in the first couple of years. Future payouts, however, are likely to fall rapidly to the point where premium costs to

producers may exceed the expected payouts. There are two characteristics about the program which are responsible for this and these are understood by knowledgeable producers. First, most producers know that the indexed moving average price is expected to fall and, second, many farmers are expecting market prices for most commodities to increase in the future. Both of these factors are consistent with reduced GRIP payouts in the long-run. Therefore, many producers will attempt to seek arrangements where they can limit or control their participation in GRIP. They want to be participating when the program is paying out on net, but do not want to be paying expensive premiums when expected payouts are small relative to premiums.

Most of the changes in organizational structure will be in the form of innovative leasing arrangements. However, these arrangements, like the GRIP program itself, will be different for every case due to a number of factors:

(1) Every operator has a different history with the crop insurance corporation.
(2) Each producer has individual yields by crop.
(3) The most productive producers may not be in the best position to make offers for land leases because they may have never participated in crop insurance and may not be able to establish individual yields with farm records.

In addition, many new aggressive producers don't have enough years of experience to establish accurate individual yields with crop insurance. They will be at a distinct disadvantage to producers who have long histories with crop insurance and have been able to build up their coverage adjustments (individual yields) for various crops. Consequently, another criticism of the current GRIP program is that its coverage will be based on "not how good you are ... but how good you used to be." There can be no doubt that this inability to get individual yield coverage which reflects the expected yields of a new intensive operation will create barriers to entry for new entrants. As an example, how can a new young farmer bid against an older farmer for a land lease when the new producer gets GRIP at the area average yield and the older farmer gets GRIP at 125% of the area average yield. What is really ironic is that the new young farmer may have been able to out bid the older farmer based on market returns.

Within farm families there are also a number of factors to consider in the land lease arrangement. With multiple operators whose history do you use? Given the importance of the 10% total acreage rule and the 20% specialty crop rule, we list some of the important questions to ask when deciding who should take GRIP and on what acres. (1) What crops did each of the operators seed over the last 3 years? (2) What percentage of total cultivated acreage did each of the operators seed over the last 3 years? (3) What are the yield histories of each of the operators? (4) How does one qualify as a farmer within the program? The responses to each of these questions are important in the organizational decisions of the farm operation.

Crop Share versus Cash Leases

Traditionally, crop share leases have earned a premium over cash leases because in a crop share lease the landlord accepts part of the risk. This

difference between the value of the crop share and cash lease is usually called a risk premium (i.e., a payment for taking on risk). However, for new crop share leases in 1991 with GRIP, the production of crops marketed by the Canadian Wheat Board (CWB) should have no risk premium because the only risk associated with income for Board crops will be the possibility of carryover.[4] Non-CWB crops should have a smaller but not zero risk premium because the market risk still exists for these crops. GRIP effectively eliminates any production risk for 1991. It is interesting but not surprising that the difference in risk premiums for crop share leases for Board and non-Board crops coincides with the bankability arguments outlined in an earlier section.

Leasing and Breaking Hayland

From an environmental perspective, the current GRIP program has restrictions on the breaking of land seeded to hay, forage or pasture. These restrictions are embedded in the 10% rule which does not allow a producer to increase seeded acreage more than 10% of the three year average of the ratio of seeded acreage to **cultivated** acreage. However, the GRIP program does allow a producer to farm newly added land in the same way as the remainder of the operation. Therefore, a producer could lease pasture and break it with nobody the wiser in this program. Particularly if crop insurance has no previous record of the land through its hay or forage insurance program.

Summary and Conclusions

There is no doubt that the Western Canadian farm sector needs the dollars expected in the current GRIP program. Our major concerns are with how these dollars will be paid because how the dollars are paid determines how producers will respond to any program. The payout mechanism in the current GRIP program distorts crop choice and creates the incentive for moral hazard in input use. In addition, the current GRIP program encourages innovative farm management arrangements which could be avoided with better program design. We present some modifications to the current GRIP, called WGRIP and AGRIP, which we believe address many of the major problems with GRIP. We agree that a safety net is needed ... but not a set of planning prices.

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[4]We are assuming that government payments are shared in the crop share lease.

Proposed Amendments to GRIP

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A. Introduction

The proposed GRIP and NISA programs represent the most significant Canadian Agricultural Legislation in the last fifty years. The anticipated dollar size of levies and payouts make it the largest agricultural program ever. The structure of GRIP which provides a revenue guarantee for each commodity based on the previous fifteen year indexed moving average of prices (IMAP) represents a major departure from the traditional view that agriculture should be market responsive. In the first few years of the program, these IMAP prices will be so high relative to the market prices that they will effectively muzzle any market signals. Major decisions on what crop to grow will be based on IMAP prices rather than market prices.

In fairness to the program designers, we point out that GRIP presents a number of significant improvements over similar income support programs implemented in the past. The GRIP has made the following improvements over WGSA:

- payouts are made on farm fed grains
- there is not a requirement to sell grain within a particular crop year to be eligible for a payout
- the range of eligible crops has been expanded
- the payouts are more predictable
- a 15 year moving average of prices provides more support during long periods of low prices when compared to a five year average of prices.

Therefore, while we do have some significant concerns with GRIP, we feel an amended program must maintain these positive features.

B. Significant Concerns

GRIP has been designed to provide income support for agricultural producers across Canada in response to unprecedented low incomes in the agricultural sector. While there is no doubt that this support is needed, we believe that GRIP in its current form has three serious problems which must be addressed immediately to avoid possible damages to the agricultural sector. The three major concerns are:

(1) GRIP will muzzle market signals with the IMAP price and will be the major factor in the 1991/92 cropping choice of producers;

(2) Expanded acreage of specialty crops may glut small markets, depress prices and greatly increase program costs; and

(3) GRIP creates an incentive for a producer to use very few inputs on any crop which he/she does not intend to insure for many years into the future.

The first of these concerns deals with how the current GRIP proposal may affect crop choice on individual farm operations. While the current version of GRIP has an acreage cap of 10% to control the incentive to increase overall seeded acreage, it does not put any control on the crops an individual producer may seed within this seeded acreage base. Therefore, in its current form, GRIP has the potential to encourage excessive production of some crops which can glut markets and depress prices for these crops in the prairie region. The GRIP provides the incentive to seed crops on a particular farm which earn the highest target revenue per acre net of cash costs of production.

The current payout mechanism is not at all responsive to current market prices. Some people may argue that a 15 year average of prices may reflect annual relative prices in any year quite accurately. However, there is strong evidence to the contrary. For example, the Manitoba IMAP price for canola and flax are $284 and $283 per tonne, respectively. This reflects that on average the flax price has been nearly equal to canola prices. However, during the past 15 years the relative price of flax to canola has ranged from 1.4 to 0.7. The relative price differences reflect market circumstances for the time period such as inventories of the crop, expected production, utilization and other market forces. The probability that the indexed average prices of the last 15 years will be a reflection of the relative values in the 1991/92 crop year is extremely low.

This problem becomes even more important for crops where Canadian acreage and production can influence price (i.e. lentils, peas, mustard, canary seed, etc.). In the crops listed, an increase in acreage may drive the price of the crop to an extremely low level, but this low level will not discourage the production of the crop in the following crop year because revenue will again be guaranteed. This leads immediately to the second concern regarding the program cost.

Due to the potential incentives GRIP may create to seed alternative crops, particularly specialty crops where price and production are NOT independent, it is extremely difficult for those who administer GRIP to control or estimate the potential costs of the overall program. Important variables in program cost

calculations are beyond the control of those administrating the program. They are in the hands of each individual farm operator. For instance, suppose that the program provides an incentive to grow lentils and, as a result, lentil acreage increases significantly. Higher acreage and higher production will lower lentil prices and force the government to pay larger indemnities on larger acres thus increasing overall program costs.

A hidden cost to the Canadian economy is the incentive not to grow specific crops because of a lower revenue guarantee under GRIP. A relatively low guarantee may reflect circumstances in the last 15 years rather than today's situation. This is particularly true for commodities which have undergone recent market development. In these commodities, farm organizations, grain companies and the Canadian Wheat Board have worked hard to expand domestic and export sales. However, with GRIP, supplies of these historically less attractive crops may be reduced in 1991. Some orders will not be filled and some customers will turn to alternative suppliers. Assuming that GRIP will again be a factor that distorts market signals in 1992, buyers may dismiss Canada as a reliable supplier in these markets. A preliminary examination of GRIP IMAP prices would indicate this could be a factor in both the barley and mustard markets in 1991. Unfortunately though, these are not the only reasons why the program may cost more than current cost estimates suggest.

Moral hazard occurs when a program or policy takes away the incentive associated with doing your best given your current set of resources. Therefore, moral hazard is a problem when program design adversely affects the incentives of individual decision makers. Producers reacting to these new incentives are likely operating optimally and legally. In GRIP, target revenues are higher than expected market revenues for all crops. Therefore, the producer has little incentive to try to grow a good crop because he/she is not rewarded, in terms of increased gross farm income, for doing so. This means that the producer can increase short run net income by cutting back on input costs and receiving the gross revenue guarantee. If a producer intends to have GRIP on a particular crop in the future, there will be some incentive to maintain the average yield with the GRIP program. However, a producer may not intend to insure the crop in the future and therefore will practice moral hazard if:

(1) he is growing a non-traditional crop on his farm;

(2) he has given notice to leave GRIP in three years;

(3) the producer is renting the land and intends to give up the lease;

(4) the producer is about to sell the land; or

(5) the producer is in the financial position that he must maximize short run returns.

Moral hazard will also increase program costs because average yields will tend to be lower than those used to calculate the initial cost estimates.

C. Incentives for Marketing Effectively

From a revenue insurance point of view it would be advantageous to provide payouts based on the actual prices individuals received for each crop. However, the safety net committee recognized that this could not be made operational because it would require information on each sale each individual producer made. Therefore, the committee moved away from perfect revenue insurance to a payout based on a season average market price for each crop. This was an important change. If the payout had been based on individual returns and sales, the incentive for each producer to manage the sale of his product to seek the highest return in the marketplace would be eliminated. For example, if coverage was based on the prices the individual actually received, a producer selling his canola for $4.00/bu. would receive exactly the same gross revenue after GRIP as someone who sold his crop for $6.00/bu. This would eliminate the incentive for good marketing which would increase program costs for any given level of protection.

D. Objectives

In seeking modification of GRIP one has to be very careful not to lose sight of the original objectives of the policy. The Federal Provincial committee on Agriculture in a report entitled **Growing Together** defined four Policy Pillars and Principles for future agricultural Policy:

- improved market responsiveness
- greater self reliance in the agrifood sector
- a national policy which recognizes regional diversity
- increased environmental sustainability

In **The Report to Ministers of Agriculture** from Grains and Oilseed Safety Net Committee the committee addressed the extent to which GRIP and NISA were consistent with these objectives. The committee felt that the proposed GRIP and

NISA were consistent with these objectives. To quote from the conclusions of the Report:

> "The committee reaffirms its belief that the combined GRIP and NISA proposal meets the Policy Pillars and Principles for Action enunciated in Growing Together. In particular, the new program proposal will provide income stabilization for grain producers in a manner which encourages market responsiveness and which recognizes regional diversity, and which contributes to self reliance and long term sustainability."

Clearly GRIP provides an income safety net far more comprehensive than exists in current programs. The long term, 15 year indexed moving average price provides greater stabilization than was afforded by the 5 year moving average net cash flow in WGSA. Targeting Gross Revenue, rather than either price or yield, makes a great deal of sense. Unfortunately, while the concept of moving from an area average to individual coverage is appealing, it cannot be made operational without creating considerable misallocation of resources in the sector. As we have carefully outlined above, in our assessment, GRIP fails to meet the Policy Pillars and Principles for Action. As outlined in Section B, (1) GRIP is not market responsive. Changes in the relative prices of crops will have little or no impact on the choice of crops grown by producers so that producers may add production to already glutted markets. (2) Grip does not encourage self-reliance as the payout from the program is more important than the level of grain output achieved. (3) GRIP does not recognize regional diversity. GRIP off-loads much of the cost of the support for the agricultural sector to the tax payer in the regions which produce grain. Given the size of the agricultural sector in these regions, the additional tax burden comes when these regional economies can least afford it. (4) Finally, GRIP is not environmentally sound. As outlined in Section B, the large expected payout provides an incentive to bring often fragile marginal land into production to collect program benefits and to adopt farming practices that are neither economically nor environmentally sound. The exclusion of hayland and alfalfa may result in the rebreaking of this land to collect program payments.

In this proposal for an Amended GRIP, we recognize that design of any effective farm safety net that is fully consistent with all of these objectives

may in fact be impossible. We argue and will subsequently show that minor modifications to GRIP can (1) make the program much more market responsive, and (2) improve resource allocation by eliminating much of the potential for moral hazard present in the program. This will vastly improve the efficiency of the program to deliver the much needed income support for the sector.

E. Proposed Amendments

Rather than proposing a single comprehensive package of amendments we propose two possible levels of amendments. In Proposal A we suggest only a minor modification to GRIP that addresses the market responsiveness. In Proposal B we suggest a somewhat larger change to GRIP that clearly separates Area Revenue Insurance from the existing Crop Insurance. When used in tandem, the second approach provides very similar protection to GRIP without many of the incentives to misallocate resources. In the final section we suggest other changes that would address a much larger range of shortcomings of GRIP.

Proposal A

Wheat Based GRIP (WBGRIP)

A farmer receives GRIP for all the spring wheat he plants. However, if he chooses to grow an alternative crop he receives a payment based on the following formula:

Payout = SA x RAP x Y/ RAY

SA = Seeded Acres of alternative crops seeded by farmer
RAP = Risk Area average Payout per acre for wheat
Y = Risk Area 15 year average Yield for wheat for the individuals soil classes*(ie. a farmer may have class D and F soils)
RAY = Risk Area 15 year average Yield for wheat
* Soil classes range from A to P in Saskatchewan and are used by Crop Insurance to adjust guaranteed yield on the basis of soil quality.

A separate calculation would be made for fallow and stubble crops. Here the payout would be based on the payout for fallow and stubble spring wheat, respectively. The producer would have the option also to purchase regular Crop Insurance for alternative (non-spring wheat) crops.

Example A1:

A producer decides to grow 100 acres of lentils or any crop other than wheat. His payout, (regardless of lentil prices and yields) would be calculated using the following formula:

SA = 100, RAP = $40, Y= 30 (class D), RAY = 20,

Payout = 100 x 40 x 30/20,

Payout = 100 x $60 = $6000

The farmer can expect the same payout per acre regardless of the crop grown other than wheat. Therefore, he has the incentive to choose the crop with the highest expected market return. This mechanism would not distort crop choice. If a producer expected market returns per acre in an alternative crop higher than what he would receive in the market growing wheat, he would grow the alternative crop. If the market returns were expected to be lower than for wheat, he would grow wheat.

The market responsiveness of this type of program has another very appealing feature. New crops can be grown and supported immediately without a lengthy waiting period for the establishment of price and yield history which is a requirement for GRIP. The extension of the program to any type of crop or land use only requires a change in the list of eligible crops, which we suggest the list should be left open ended.

This mechanism also allows the producer the option of receiving a guaranteed return. An individual concerned about risk can fully protect the GRIP level of income by growing wheat. To reduce some of the yield risk from choosing to grow an alternate crop, these crops could be made eligible for crop insurance at the market price.

This mechanism may also reduce the scope for moral hazard. Note that under the current GRIP program a producer who never has grown Canary seed may choose to grow the crop and not put on any inputs. The individual may face no adverse consequences from a lower ten year average yield of Canary seed if there are no plans to seed it in the future. Under this proposed mechanism, Canary seed will be managed for the maximum net return per acre at the market price. The producer is less likely to jeopardize his long term spring wheat yield for the sake of program benefits since spring wheat is a very important crop on many farms.

Proposal B

AGRIP - Area Gross Revenue Insurance Program

This proposal involves two separate programs which would remain separate and voluntary. The first is a modified form of the current GRIP program (AGRIP). The second is crop insurance as it operated in the 1990 crop year. The producer could choose to enrol in one the other or both. First, we will describe the modified GRIP (AGRIP).

The modified GRIP, AGRIP, would operate as an area program as opposed to an individual program. The size of these areas (i.e. RM's or townships) and calculations to smooth indemnity payments across different areas is arbitrary and could be decided at a later date. The areas may be as small as townships or as large as insurance risk areas. Under AGRIP, each producer would be guaranteed an area average yield for spring wheat based on his/her soil classification multiplied by 70% of the IMAP price. This is the guaranteed revenue. This area average spring wheat yield would be a weighted average of stubble and summerfallow yields based on the 3 year history of acreage of stubble and summerfallow wheat in the region. An alternative to basing the guaranteed revenue and payouts solely on spring wheat would be to use a regional market basket of crops to set the guaranteed revenue. However, in our example we focus on the simplest example where stubble and summerfallow spring wheat are the only crops in the market basket. Spring wheat was selected because it is a crop that is consistently grown across the prairie region and thus would make it easier to administrate the program in the initial year. In the long run (i.e., after the initial year), a market basket concept would be preferable and we discuss our reasons for this preference in more detail at the end of the section.

Payouts would be made on a regional basis when the area average yield, as described above, multiplied by the market price of spring wheat is less than the guaranteed revenue for the region. Once the payout per acre for a particular year is determined, it would be paid to each producer in the region for all seeded acres regardless of whether those acres were in wheat or any other annual crop. Therefore, the program is still market responsive since the producer still has the incentive to seed alternative crops based on market signals. Furthermore, there is no incentive for moral hazard because the producer cannot influence their indemnity by incurring lower than average yields. The only variable a producer can choose to affect the size of his payout is total seeded

acres on fallow and stubble. Consequently, two factors which could have adversely affected the governmental costs of the program are alleviated under this approach. The major disadvantage of this approach is that it is no longer a program which is individual to each producer. Note however, the program does contain offsets at the area level. If a township had very high yields and low prices or low yields and high prices no payouts would be triggered. This is an important feature which should virtually eliminate payouts in an area in years when they are not required and thus control the cost of the program.

We resolve the loss of individuality of the amended GRIP by arguing that Crop Insurance be maintained as it appeared in the 1990 crop year. Producers would have the option of taking crop insurance to protect them against individual crop failures of all crops including spring wheat. Moral hazard in crop insurance may exist but the incentive to practice moral hazard is significantly less than with the current GRIP, particular if crop insurance does not offer insurance prices greater than market prices. Crop insurance would still be an attractive program to producers because it offers many benefits which could not be implemented in the amended GRIP. These include; spot loss hail coverage, reseeding benefits, quality guarantees and many others.

The major advantage of the above program is that it allows a producer to purchase Crop Insurance coverage if he wants it. However, the program substantially reduces the incentive to practice moral hazard and it is neutral to the crop choice decisions made by producers. This is important for two reasons. (1) Program costs from an administrative perspective are much easier to estimate and much easier to control since producer responses to the program will be minimal. Producers may tend to increase acreage up to the 10% seeded cap in GRIP but will do so in a market responsive manner. This will limit the potential costs of the program, particularly for crops where price and production are not independent. (2) Neutrality of crop choice within the amended program is important because the last thing we want to do with an agricultural policy is destroy the fragile markets for many of the specialty crops produced in the prairie region. We have spent many years developing institutions and processing centres to help the flow of these products from the farm gate to the final consumer. In the process, we have diversified our economy. The current GRIP has the potential to reverse all this hard work and put us many years back in the market development process.

In conclusion, we return again to the regional market basket approach which we mentioned above. The advantage of a market basket approach in calculating guaranteed revenues and payments is that it would be more sensitive to the crop mix in each of the regions. The basket would be based on the acreage weighted average of IMAP prices multiplied by the acreage weighted average yields for both stubble and summerfallow for the major crops in the region. An example of this calculation for a single year in a particular region is illustrated below:

$$GR = \frac{\sum_{i=1}^{N} 0.70 * IMAP_i * ACRE_i * \frac{AAYF_i * FACRE_i + AAYS_i * SACRE_i}{ACRE_i}}{\sum_{i=1}^{N} ACRE_i}$$

where $IMAP_i$ is the IMAP price for crop i, $ACRE_i$ is the total acreage in the region seeded to crop i (both fallow and stubble acreage), $AAYF_i$ is the area average yield for crop i grown on summerfallow, $FACRE_i$ is the total acreage of crop i planted on fallow in the region, $AAYS_i$ is the area average yield for crop i grown on stubble, $SACRE_i$ is the total acreage planted on stubble of crop i in the region, and N is the total number of crops in the market basket.

Using this market basket approach, if the guaranteed revenue is calculated as shown above, payouts would be based the actual area shortfall using the same basic equation by substituting actual yield and actual prices for average yields and IMAP prices. The only difference between this market basket approach and our spring wheat example is the size of the basket. A single crop basket of spring wheat simple means that N=1 where the subscript 1 refers to spring wheat.

Finally, both WBGRIP and AGRIP are much less likely to become targets of trading partners in GATT as they are more neutral to production and marketing choices than the original GRIP. The income support is generally available and not tied to specific commodity production and would therefore be viewed more favourable under existing GATT rules.

F. Other Important Issues and Shortcomings

The Amendments to GRIP which we have proposed increase the market responsiveness of producers and reduces the scope for moral hazard. These changes will enhance the efficiency of the program to deliver a desired level of

income support. However, these proposals do not address many of the other important shortcomings of GRIP. If the Safety Net Policy Pillars are expanded to include the distribution of income; then equity issues become more apparent.

1) Equity Issues

The proposals do not address equity issues. There are two very pressing equity issues which should be addressed: a) the transfer of some of the Federal responsibility for agriculture to the provincial tax payers and b) the support of individuals with incomes above the income of most Canadians with tax dollars.

The introduction of GRIP represents a major shift in the funding of support programs for agriculture. In Saskatchewan, the change in the Federal Government's financial commitments in moving out of WGSA and Crop Insurance to GRIP is a meagre 8% ($278m/$258m - 1.0) The producers share of contributions increase by 35% ($311m/$229m - 1.0). The Government of Saskatchewan's Financial commitments increase by over 355% ($197m/$43m - 1.0). GRIP will cost Saskatchewan taxpayers over $180 per year per capita. This increased tax burden comes at a time when the grain trade war has already depressed grain prices and the provincial economy.

A equity issue that should be raised is the amount of program benefits an individual producer can receive. For the upcoming year, an individual seeding 5000 acres could receive a payment as large as $250,000 from GRIP. Assuming the program is actuarially sound, the $16/acre premium subsidy for the same individual, $80,000, could be considered as the annual subsidy to this individual. If the objective of the program is to support agricultural income, then this type of large individual subsidy may reduce the long run support for the program by urban voters. To address this issue at least two options exist: a) place a limit on acres eligible for coverage by an individual or b) Gross up GRIP payments by a percentage for the purposes of income taxation. For example, a GRIP payment of 10,000 would have to be reported as $11,000 for income tax. In this scheme, producers with high incomes would receive reduced after tax benefits from the program which would in part address the equity issue.

2) Environmental Issues and Long Run Resource Use

A further concern which should be addressed in the program is the incentive to break up marginal land and enrol it in GRIP. Clearly, from an environmental point of view this should be stopped. For ease of implementation, the program

could contain a "sod buster" and "swamp buster provisions" similar to the ones used in US farm programs. Under these provisions any new land brought into production is not eligible for any US farm program benefits. A similar policy could be adopted for GRIP. A preferred alternative is to allow producers to enrol acres of perennial forage into the AGRIP program. The payment per acre would be determined in a similar way as proposed for all annual crops.

The GRIP program has already been adjusted from the initial proposal presentation with the suggestion that a 10% increase in cropped acres be applied to each producers historical cropping intensity. These and other positive changes which improve its operation either environmentally, economically or in addressing equity issues will result in a better program for farmers, the agricultural industry and taxpayers.